FEMA

ILLINOIS DEPARTMENT OF NATURAL RESOURCES
COOPERATING TECHNICAL PARTNERS
MAPPING ACTIVITY STATEMENT

Mapping Activity Statement No. IDNR05-20 – Digital Flood Insurance Rate Map Production and Development of Updated Flood Data for Union County, Illinois

In accordance with the Cooperating Technical Partners (CTP) Partnership Agreement dated 4-28-04 between the Illinois Department of Natural Resources (hereafter called the IDNR) and the Federal Emergency Management Agency (FEMA), Mapping Activity Statement (MAS) No. IDNR05-20 is as follows.

SECTION 1—OBJECTIVE AND SCOPE

The objective of the Flood Map Project documented in this MAS is to develop a Digital Flood Insurance Rate Map (DFIRM) and Flood Insurance Study (FIS) report for Union County, Illinois. The DFIRM and FIS report will be produced in the FEMA Countywide Format. The mapping will use the Universal Transverse Mercator (UTM) coordinate system NAD83 horizontal datum, and North American Vertical Datum (NAVD) of 1988.

The scope of work and subsequent cost estimate for the work in this Mapping Activity Statement is based upon the information provided to IDNR in the Pre-Scoping Reports produced by Baker Engineering, Inc. The Pre-Scoping Reports provided to IDNR include studied stream miles (Zone AE floodplain with and without floodway); unstudied stream miles (Zone A floodplain); number of LOMC that must be address in this mapping process and current number of effective Flood Insurance Studies (FIS). Should stream miles, LOMC's or number of FIS vary significantly from those reported in the Pre-Scoping Reports, IDNR shall prepare and deliver to FEMA a Special Problem Report (SPR) noting estimated costs differentials due to the change in scope of work. The DFIRM panel layout and map scales shown in the attached graphic were prepared by the Illinois State Water Survey.

The base map identified for this project is the series of United States Geological Survey Digital Orthophoto Quadrangles. Should an alternate, higher resolution source of base map data be identified through the Scoping process the implications with respect to the scope of work and costs will be evaluated and a Problem Resolution Report prepare if needed.

The best available digital topographic data identified for this mapping project are United States Geological Survey Digital Line Graphics (DLG). The floodplain boundaries of studied streams will be visually inspected for agreement with the identified DLG. Should an alternate, higher resolution source of topographic data be identified during the scoping process the implications with respect to the scope of work and costs will be evaluated and a Problem Resolution Report prepare if needed.

This product will be in NAVD 1988. The Mississippi River studies *Upper Mississippi River Flow Frequency Study* (USCOE, August 2003) and the *Upper Mississippi River Floodway Computation* study (draft report, June 8, 2004) are registered to the National Geodetic Vertical Datum (NGVD) 1929 datum and will require conversion to the NAVD 1988 in accordance with the *Guidelines and Specifications*

Appendix B. Mapping Partners involved in this project will incorporate new and/or updated flood hazard data from those studies, as summarized in Table 1-1.

Table 1-1

Flooding Source	Reach Limits River Miles	Reach Length (miles)
Mississippi River	78 to 55	23

Existing GIS data and study needs for the community will be researched, obtained, organized and uploaded to the Multi-hazard Information Platform (MIP) in accordance with Activity 1. Scoping will be necessary to determine the final statement of work for this project.

The National Service Provider (NSP), in coordination with the CTP shall input the scope of work into the FEMA Scoping Tool for this project. This includes information concerning effective map information, local GIS data availability, and the flood reach data for existing conditions.

This Flood Map Project will be completed by the following

- The Project Team for Union County;
- Illinois Department of Natural Resources
- FEMA Region V; and
- Baker Corporation, under contract to FEMA's as National Service Provider (NSP).

The CTP shall notify FEMA and the NSP by e-mail of all meetings with community officials at least one week prior to the meeting (with as much notice as possible). FEMA and/or the NSP may or may not attend the community meetings

The activities for this Flood Map Project, including required Quality Assurance/Quality Control (QA/QC) reviews, and the Mapping Partners that will complete them are summarized in the table 1-2. The sections of this MAS that follow the table below describe the specific activities, responsible Mapping Partner(s), FEMA standards that must be met, and resultant map components.

Table 1-2

Activities	CTP	NSP	FEMA
Activity 1 – Scoping	X	X	X
Activity 2 - Outreach	X	X	X
Activity 10 – Floodplain Mapping (Detailed Riverine or Coastal Analysis)	X		

Activities	CTP	NSP	FEMA
Activity 10A – Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data)	X		
Activity 10B -- Floodplain Mapping (Refinement or Creation of Zone A)	X		
Activity 11 – Independent QA/QC Review for Floodplain Mapping	X		
Activity 12 – Base Map Acquisition	X		
Activity 13 – DFIRM Production (Non-Revised Areas)	X		
Activity 13A – Independent QA/QC Review of DFIRM Production (Non-Revised Areas)	X	X	
Activity 14 – DFIRM Production (Merge Revised and Non-Revised Information)	X		
Activity 14A – Application of DFIRM Graphic and Database Specifications	X		
Activity 14B – Independent QA/QC Review of DFIRM Product Meeting FEMA Graphics and Database Specifications	X		
Activity 15 – Preliminary DFIRM and FIS Report Distribution	X	X	X
Activity 16 – Post-Preliminary Processing	X	X	X

FEMA has developed tools to assist in the development of the flood hazard data studies and the Digital Flood Insurance Rate Maps (DFIRM's) if the CTP wishes to use them. FEMA will, through the NSP, provide all CTPs access to and training in these tools. The tools available at this time include WISE software and the DFIRM production tools. The use of these tools will improve the Map Modernization and efficiency of all mapping partners.

The Data Capture Standard submittals will be required at the following study milestones:

- Project Scoping (as specified)
- DFIRM Mapping (draft and preliminary).

QA/QC review activities may be performed by CTPs or the NSP at the discretion of FEMA. If the CTP will be utilizing their staff or contractors to do the QA/QC review, this should be identified during scoping. The CTP will need to submit their QA/QC plan with a checklist to the Regional Project Officer for approval. Please note the NSP will also be performing periodic audits and overall study/project management to ensure study quality.

FEMA will be providing download/upload capability for intermediate data submittals through the Management Information Portal (MIP). Data submittals uploaded via the MIP, will include the same data required prior to the existence of the MIP.

Activity 1 – Scoping

Responsible Mapping Partner: IDNR

Scope: This task involves collecting data from a variety of sources including community surveys, other Federal and State Agencies, local units of government, NFIP State Coordinators, Community Assistance Visits (CAV's) and FEMA archives.

Data collection will include obtaining the best available base map materials (corporate limits, roads, orthophotos, etc) along with stream centerline files. The acquired data will be imported into the scoping tool and used during the Scoping Task. In the Scoping Tool all streams should have unique names, the limits of the effective FEMA studies will be identified, LOMC areas should be identified, and community requests should be identified. This task also includes populating the streamlines with existing pipeline and scoped studies currently underway. At the request of the CTP, the FEMA Region through a regional task order may direct the NSP to assist with the collection of pre-scoping data and population of the Scoping Tool.

In cooperation with the FEMA Region, a Project Team will be established consisting of personnel from IDNR, Union County, and community officials within the county. The Project Team will be responsible for the activities identified in Activity 1of this Statement of Work including but not limited to identifying and acquiring Base Map information relevant to this MAS, coordinating meeting dates and locations for Project Scoping and Post Preliminary presentation of the DFIRM'S, and generally assisting with the completion of tasks identified in this Statement of Work.

Preliminary Research Activities can be separated into two categories—researching effective information and researching available data for the Flood Map Project. The following tasks shall be completed by the NSP prior to the Scoping Meeting to research effective information: inventory the FEMA archives for effective FIRM panels, FRFM panels, FIS reports, and other flood hazard data or existing study data; populate relevant areas of the Scoping Tool; and develop a Scoping Map. *Costs associated with library retrieval of effective information have not been included in this MAS.* If the CTP is charged for library retrieval performed by the NSP it will necessitate a revision to this MAS. IDNR will collect information from the CAV and CAC files; and upload it to the Scoping Tool.

The following tasks shall be completed in accordance with Activity 1 to research available data for the Union County Flood Map Project: identify available base map information; identify available topographic data; identify available flood hazard data; and identify other available hydrologic and hydraulic information.

IDNR will co-ordinate, set-up, and conduct the Scoping Meeting with the assistance of the Project Team. This includes identifying a time, place, and all participants. The purpose of this meeting is to present current mapping information to local officials and coordinate on identification and prioritization of study areas. IDNR shall be responsible for compiling the necessary information for the meeting. These items may include: FIS and FIRM for affected communities; USGS quads for the study area; best available community base map(s); effective FIRM summary; Available Data Inventory; Scoping Map; Scoping Meeting Agenda/Minutes form; Aerial photos/topographic mapping if available; existing drainage studies or other H&H data; Community master plan(s)/Drainage Master Plan(s); Zoning Maps; Street Maps; As-built plans; and Floodplain Ordinance(s).

The CTP Management Team shall review the mapping needs list resulting from the Scoping Meeting, review the research findings, and make selections of proposed methods for obtaining/producing flood data. Any additions or changes to the activities listed in this MAS shall be discussed with all Project

Team Members. All needs shall also be prioritized. In general, highest priority shall be given to the following areas: areas of dense existing or anticipated development, including areas where new road crossings have been constructed over stream(s); areas affected by flood-control structures and/or channelization; areas where natural physical changes in the floodplain have been significant (due to subsidence or extreme erosion, for example); areas that were studied by approximate methods and unmapped areas, especially those with development pressure; areas where the community has experienced flooding outside mapped floodplains, with severe damage to buildings and/or infrastructure; areas where mapped flood hazards do not match those shown on contiguous FIRM's (unless those FIRM's are not considered to be accurate); and areas where flood data (BFE's, floodplains, and regulatory floodways) are likely to be changed by a restudy.

Based on the discussion of mapping needs, IDNR and the FEMA Project Officer will finalize the areas to be included in the project and areas identified as future mapping needs (based on recommendations provided by the Project Team). Areas to be studied by detailed and approximate methods shall be identified. The following issues will be discussed and refined: Review and Refinement of Flood Hazard Identification Methodologies; Review of existing studies not yet submitted as LOMR; Review of Proposed Paneling Scheme; Review and Refinement of Base and Topographic Map Source; and Finalization of Map Production and Database Options.

Standards: All work under Activity 1 shall be performed in accordance with the standards specified in Section 5.

Deliverables:

- The Final Scoping Report will be delivered in accordance with the schedule outlined in Section 6 for this Activity to the Regional Project Officer for approval.

- IDNR shall make available to FEMA upon request copies of all digital files obtained that are not proprietary and lists of files that may be available at a later date; a summary of the mapping needs identified in the Scoping Meeting; and Scoping Tool project files.

Activity 2 – Outreach

Responsible Mapping Partner: IDNR and FEMA (NSP)

Scope: The outreach activities for a Flood Map Project can best be understood as a process that begins during the Project Scoping phase and continues through the Map Production and Post-preliminary phases. A regulatory overview of required activities is followed by a description of tools that can be used in working with stakeholders to keep them informed and to solicit their input.

The overarching goal for conducting outreach is to create a climate of understanding and ownership of the mapping process at the State and local levels. Well-planned outreach activities can reduce political stress, confrontation in the media, and public controversy, which can arise from lack of information, misunderstanding, or misinformation. These outreach activities also can assist FEMA and other members of the Project Team in responding to congressional inquiries.

The IDNR will work with the Regional Office during the initiation of this activity to determine an Outreach Plan for implementation throughout the Mapping Project. The Regional Office will have access to many outreach tools that have been developed for this process that can be utilized or customized for your use.

By proactively reaching out to all key stakeholders as early in the Flood Map Project as possible, the maps can be used to their full potential. The likelihood of appeals may also be reduced or eliminated. Specific activities shall include, but are not limited to the following.

- ✓ Establishing two-way communication to address the needs of, inform and obtain feedback from, the stakeholders. Communication will take the form of community meetings, informational mailings, email, and a website posting of each county's Preliminary DFIRM panels for public viewing and comments.
- ✓ Ensuring compliance with due process requirements.
- ✓ Interacting with technical representatives to ensure production of accurate and up-to-date maps.
- ✓ Enhancing ownership by communities.
- ✓ Tracking, monitoring, and evaluating outreach activities and adjusting efforts according to ongoing feedback and evolving project needs.

All communication with local governments will be done in accordance with Title 44 Code of Federal Regulations Part 66.

Standards: All work under Activity 2 shall be performed in accordance with the standards specified in Section 5.

Deliverables: Upon determination of an Outreach and Coordination Approach the IDNR shall deliver the following to the FEMA Regional Project Officer in accordance with the schedule outlined in Section 6 for this Activity:

- A report detailing outreach and coordination activities
- Backup or supplemental information used in writing this report

At the completion of the DFIRM process, IDNR will submit a summary of outreach activities and any changes made in the outreach approach based on the actual implementation

Activity 10 - Floodplain Mapping (Detailed Riverine or Coastal Analysis)

Responsible Mapping Partner: IDNR

Scope: IDNR shall delineate the 1- and 0.2-percent-annual-chance floodplain boundaries and the regulatory floodway boundaries (if required) for the flooding sources for which new detailed hydrologic, and/or hydraulic analyses has been performed and identified for inclusion as listed in the table in Table 1-1 . IDNR shall incorporate the new or revised hydrologic, hydraulic, and/or coastal modeling and shall use the topographic data provided by the community or available from FEMA contractors and/or acquired during Activity 1, Scoping, to delineate the floodplain and regulatory floodway boundaries on a digital work map. In addition, IDNR shall incorporate the results of all effective Letters of Map Change (LOMC's) within the revised areas as appropriate. Also, IDNR shall address all concerns or questions regarding Activity 10 that are raised during the independent QA/QC review under Activity 11.

Activity 10A - Floodplain Mapping (Redelineation of Detailed Floodplain Boundaries Using Updated Topographic Data)

Responsible Mapping Partner: IDNR

Scope: IDNR shall delineate the 1- and 0.2-percent-annual-chance floodplain boundaries for the flooding sources listed in the Floodway Data Tables of applicable FIS's. IDNR shall use the topographic data acquired from the community through Activity 1 and/or 12 or use available United States Geological Survey topographic data displayed on Digital Line Graphs to delineate the floodplain as appropriate on a digital work map. If new topographic data does not reflect the same hydraulic characteristics as in effective study, IDNR shall evaluate the topographic data to determine if changes are significant enough to invalidate the floodplain boundary re-delineations. If significant, IDNR shall contact the FEMA Regional Project Officer identified in Section 12 of this MAS with a recommendation. In addition, IDNR shall address all concerns or questions regarding Activity 10A that are raised during the independent QA/QC review under Activity 11.

Activity 10B - Floodplain Mapping (Refinement or Creation of Zone A)

Responsible Mapping Partner: IDNR

Scope: IDNR shall delineate the 1-percent-annual-chance floodplain boundaries of Zone A floodplains as noted in Pre-Scoping Report. IDNR shall use scanned images of effective FIRM panels registered to the base map acquired under Activity 12 to digitize the floodplain boundaries. In addition, IDNR shall address all concerns or questions regarding Activity 10B that are raised during the independent QA/QC review under Activity 11.

Standards: All work under Activity 10, 10A, and 10B shall be performed in accordance with the standards specified in Section 5.

Deliverables for Activities 10 / 10A / 10B: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, IDNR shall make the following products available by submitting it to the FEMA Regional Office via the digital media

identified in the paragraph above, if the MIP is unavailable. This submittal may occur simultaneously with Activity 11, 13, 13A, 14, 14A and 14B as shown in the schedule outlined in Section 6.

- Digital work maps showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFE's, flood insurance risk zone labels, and all applicable base map features;
- Any backup or supplemental information, including supporting calculations, assumptions and analysis methodologies for any computed 1-percent-annual chance water-surface elevations (if applicable) used in the mapping required for the independent QA/QC review under Activity 11;
- DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the floodplain mapping tasks;
- An explanation for the use of existing topography for the studied reaches, if appropriate.
- If automated GIS-based models are applied, all input data, output data, intermediate data processing products, and GIS data layers shall be submitted upon request unless the data used is proprietary.
- FEMA Format DFIRM Database or Data Delivery consistent with the FEMA Data Capture Standards –Appendix N of the Guidelines and Specifications for Flood Mapping Partners

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf.

Activity 11 - Independent QA/QC Review of Floodplain Mapping (Revised Areas)

Responsible Mapping Partner: IDNR

Scope: IDNR shall establish a review procedure for the floodplain mapping performed under Activities 10, 10A, and 10B to ensure that the results of the analyses performed are accurately represented. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. This work shall include, at a minimum, the activities listed below.

- Review the cross sections for proper location and orientation on the work map and agreement with the Floodway Data Table.
- Review the BFE's shown on the work map for proper location and agreement with the results of the hydraulic modeling.
- Review the regulatory floodway widths for agreement with the widths shown in the Floodway Data Table and the results of the hydraulic modeling.
- Review the floodplain boundaries for agreement with the flood elevations shown in the Floodway Data Table and the contour lines and other topographic information shown on the work maps.

- Review the floodplain widths at cross sections as shown on the work maps to ensure they match the Floodway Data Table.
- Review the floodplain boundaries as shown on the work maps to ensure they match the Flood Profiles.
- Review the flood insurance risk zones as shown on the work maps to ensure they are labeled properly.
- Review the DFIRM mapping files to ensure they were prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners.*
- Review the metadata files to ensure they include all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners.*

Standards: All work under Activity 11 shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, IDNR shall make the following products available to FEMA by uploading the digital data to MIP or submitting it to the FEMA Regional Office if the MIP is unavailable. This submittal may occur simultaneously with Activity 10, 10A, 10B, 13, 13A, 14, 14A and 14B as shown in the schedule outlined in Section 6.

- A Summary Report that describes the QA/QC review,
- Descriptions of resolutions of any problems that are identified during the QA/QC review; and
- An annotated work map with all questions and/or concerns indicated if necessary.

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf.

Activity 12 - Base Map Acquisition

Responsible Mapping Partner: IDNR

Scope: Activity 12 consists of obtaining the digital base map, as provided by the community or using the latest Digital Ortho Quarter Quadrangles produced by the United States Geological Survey, for the project. IDNR shall secure the digital base map. The required activities are as follows:

- Obtain digital files (raster or vector) of the base map.
- Secure necessary permissions from the map source to allow FEMA's use and distribution of hardcopy and digital map products using the digital base map, free of charge.
- Certify that the digital data meets the minimum standards and specifications that FEMA requires for DFIRM production.
- Populate the DFIRM database with the information required by FEMA.

Standards: All work under Activity 12 shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, IDNR shall make the following products available to FEMA in accordance with the schedule outlined in Section 6 for this Activity:

- Written certification that the digital data meet the minimum standards and specifications and
- Documentation that FEMA can use the digital base map.

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf.

Activity 13 – DFIRM Production (Non-Revised Areas)

Responsible Mapping Partner: IDNR

Scope: For all flooding sources except those segments for which updated flood data will be developed under Activities 1 through 11, IDNR shall convert the information shown on the effective FIRM and Flood Boundary Floodway Map (FBFM) panels for all incorporated and unincorporated areas of Union County to digital format in conformance with FEMA DFIRM specifications. IDNR shall use the base map acquired under Activity 12 for the conversion. IDNR shall digitize all effective FIRM panels and FBFM panels (8 total as reported in the Pre-Scoping package). IDNR also shall incorporate the results of LOMC's issued by FEMA since the date of the current effective FIRM for each affected community as shown on the list of LOMC's provided by Baker Engineering, Table 1-3. LOMAs and LOMR-Fs where the base flood is not modified by hydrologic or hydraulic studies identified in this MAS or through the scoping process will be identified in the Summary of Map Actions (SOMA) for revalidation. LOMAs and LOMR-Fs where the base flood is modified by hydrologic or hydraulic studies identified in the MAS or through the scoping process will be listed in the SOMA as requiring review. Case files will not be reviewed and SOMA status will be determined on the basis of the information provide in the LOMC table. Also, IDNR shall address all comments and questions regarding Activity 13 that are raised during their internal and independent QA/QC review under Activity 13A.

IDNR shall not digitize the flood theme for those segments of flooding sources for which updated flood data will be developed if so identified through the Scoping Process in Activity 1. Rather, IDNR shall leave these as "holes" in the digital flood theme for this Activity. These holes will be addressed in other activities in this MAS so that at the point of merging revised and non-revised areas in Activity 14, the DFIRM will be whole and complete.

The number of panels produced shall be consistent with the paneling scheme shown on attached map prepared by Illinois State Water Survey.

Standards: All work under Activity 13 shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, IDNR shall make the following products available to FEMA in accordance with the schedule outlined in Section 6 for this Activity: This submittal may occur simultaneously with Activity 10, 10A, 10B, 11, 13A, 14, 14A and 14B as shown in the schedule outlined in Section 6.

- Digital work maps showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFE's, flood insurance risk zone labels, and all applicable base map features;
- DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM, including a check that the road and floodplain relationship is maintained for all non-revised areas.

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf.

Table 1-3

CID	CASE_NUM	LOMC_TYPE	REQ_RECVD	DETERM DATE	DETERM TYPE	FINAL_LTR	PROJ_NAME	FLOOD_SRC	MAP_PANEL	MAP_DATE	PROPDESC	PROP ADDR	ZONE	COMNAME
170656		LOMA	2/12/1986	5/22/1986	2						WWTP			Union County
170656		LOMA	5/22/1986	5/22/1986	2				0007B	2/19/1986	E1/2,Sw1/4,S36, T12s,R2w,3pm, Rcrd In Book 102,P46			Union County
170656		LOMA	6/19/1989	10/2/1989	2				0175B	9/30/1991	L1,Beaver Creek Ests,E1/2,Nw1/4 ,S27,T44n,R6e, Doc#994419	16702 Kunde Rd		Union County
170656		TBD	5/20/1992	5/20/1992	11		Revised Analyses And Mapping For Mississippi River Floodway							Union County
170656	01-05-2236A	LOMA	4/23/2001	6/27/2001	2	2000-70-RS	4740 State Route 146 West; Section 22, T 12 S, R 2 W	Green Creek	170656 0075B	2/19/1986	Section 22, T 12 S, R 2 W	4740 State Route 146 West	C	Union County
170656	02-05-2389A	LOMA	3/27/2002	9/27/2002	2	2000-70-RS	Section 1, Township 13 South, Range 2 West Of 3rd P.M.; 200 Kornthal Church Road	Dutch Creek	170656 0100B	2/19/1986	Section 1, Township 13 South, Range 2 West Of 3rd P.M.	200 Kornthal Church Road	C	Union County
170656	03-05-0806A	LOMA	11/15/2002	2/5/2003	2	2000-70-RS	A Portion Of Sect 21, T12s, R2w, Of 3rd Pm; 6030 S. R. 146 W	Dutch Creek	170656 0075B	2/19/1986	Por Of Sec21, T12s, R2w, 3rd P.M.	6030 State Route 146 West	C	Union County
170656	03-05-5437A	LOMA	9/10/2003	10/1/2003	2	2000-70-RS	T12s, R2w 3rd P.M., Se 1/4 Of Section 19; 490 Graham Lane	Mississippi River	170656 0075B	2/19/1986	T12s, R2w 3rd P.M., Se 1/4 Of Section 19	490 Graham Lane	C	Union County

CID	CASE_NUM	LOMC_TYPE	REQ_RECVD	DETERM DATE	DETERM TYPE	FINAL_LTR	PROJ_NAME	FLOOD_SRC	MAP_PANEL	MAP_DATE	PROPDESC	PROP ADDR	ZONE	COMNAME
170656	04-05-2629A	LOMA	3/11/2004	6/2/2004	2	2000-70-RS	Section 36, T 12 S, R 2 W; 1245 State Route 127 South	Unnamed Trib To Dutch Creek	1706560075B	2/19/1986	Section 36, T 12 S, R 2 W	1245 State Route 127 South	C	Union County
170656	04-05-3785A	LOMA	6/7/2004	10/29/2004	2		A Portion Of Section 20, Township 13, Range 2 West – 6345 Old Cape Road		1706560100B	2/19/1986	Section 20, Township 13, Range 2 West	6395 Old Cape Road	C	Union County
170656	86-05-0731W	LOMA		5/22/1986	2		Part Of E. 1/2 Of S.W. 1/4 Of Sect. 36, T12s, R2w 3rd Princ. Met.		1706560007B	2/19/1986	Part Of E. 1/2 Of S.W. 1/4 Of Sect. 36, T12s, R2w		C	Union County
170656	98-05-054A	LOMA	10/1/1997	11/26/1997	2		400 Wenger Lane	Cany Creek	1706560075B	2/19/1986		400 Wenger Lane	A	Union County
170656	99-05-924A	LOMA	11/11/1998	12/22/1998	2		Part Of Section 20 - 6275 Old Cape Road	Mississippi River	1706560100B	2/19/1986	Part Of Section 20 - 6275 Old Cape Road		C	Union County

Activity 13A – Independent QA/QC Review of DFIRM Production (Non-Revised Areas)

Responsible Mapping Partner: IDNR

Scope: IDNR shall review the DFIRM panels submitted through an internal QA/QC process under Activity 13 to ensure that the new DFIRM panels accurately represent the information shown on the effective FIRM's and FBFM's for the area mapped. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. This work shall include, at a minimum, checking the following:

- Cross sections were properly located and oriented as shown on the FIRM or FBFM.
- BFE's are properly located and agree with the BFE's shown on the FIRM.
- Regulatory floodway widths agree with the widths shown on the FIRM or FBFM.
- The 1 and 0.2-percent-annual-chance floodplain boundaries agree with the floodplain boundaries shown on the FIRM and the contour lines, other topographic information, and planimetric information shown on the DFIRM base.
- For coastal studies, setup and run-up height elevations shown on the work map agree with those shown on the data table(s), and still water elevations are shown where coastal and riverine flooding studied in detail join.
- Flood insurance risk zone designations are indicated properly.
- Road and floodplain relationships are maintained for all unrevised areas.
- DFIRM mapping files meet the GIS file and database format requirements specified in FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* and conform to those requirements for content and attribution.
- Metadata files describing the DFIRM data include the required information.

Standards: All work under Activity 13A shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partner.* , This submittal may occur simultaneously with Activity 10, 10A, 10B, 13, 14, 14A and 14B as shown in the schedule outlined in Section 6. :

- A Summary Report that describes the findings of the QA/QC review noting any deficiencies and how those were resolved.
- An annotated copy of the DFIRM with all questions and/or concerns indicated if necessary.

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf.

Activity 14 –DFIRM Production (Merging Revised and Non-Revised Information)

Responsible Mapping Partner: IDNR

Scope: Upon completion of the floodplain mapping activities for the revised areas (Activities 10, 10A, and/or 10B) and the DFIRM production for non-revised areas (Activity 13), IDNR shall merge the digital floodplain data into a single, updated DFIRM. This work is to include tie-in of flood hazard information for areas that were not studied as part of the Flood Map Project documented in this MAS. IDNR also shall tie in the revised and non-revised Flood Profiles, floodplain boundaries, and regulatory floodway boundaries with contiguous communities that have DFIRM's produced under Map Mod but were not studied as part of the Flood Map Project documented in this MAS. IDNR shall coordinate with FEMA and those Mapping Partners responsible for Activities 10, 10A, 10B, and 13, as necessary, to resolve any potential tie-in issues.

Standards: All work under Activity 14 shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners.* This submittal may occur simultaneously with Activity 10, 10A, 10B, 11, 13, 13A, 14A and 14B as shown in the schedule outlined in Section 6.

- Digital work maps showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFE's, flood insurance risk zone labels, and all applicable base map features;
- DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM.
- Profiles and floodway data tables for streams identified in Activity 10 and updated profiles and floodway data tables as needed for preparation of a countywide FIS; format as documented in Appendix J of *Guidelines and Specifications for Flood Hazard Mapping Partners.*

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf.

Activity 14A – DFIRM Production (Application of DFIRM Graphics and Database Specifications)

Responsible Mapping Partner: IDNR

Scope: IDNR shall apply the final FEMA DFIRM graphic and database specifications to the DFIRM files produced under Activity 14. This work shall include adding all required annotation, line pattern, area shading, and map collar information (e.g., map borders, title blocks, legends, and notes to user).

IDNR will be preparing the database for this project in the Standard format. The database shall be produced in accordance with Appendix L of the Guides and Specifications for Flood Hazard Mapping Partners. IDNR shall coordinate with those Mapping Partners responsible for Activities 10, 10A, 10B, 13, and 14, as necessary, to resolve any problems that are identified during Activity 14A.

Standards: All work under Activity 14A shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, IDNR shall make the following products available to FEMA by uploading the digital data to the MIP or submitting it to the FEMA Regional Office if the MIP is unavailable. This submittal may occur simultaneously with Activity 10, 10A, 10B, 13, 13A, 14, and 14B as shown in the schedule outlined in Section 6. Where paper documentation is required by State Law for Professional certifications, you may submit the paper in addition to a scanned version of the paper for the digital record.

- Digital work maps showing the 1- and 0.2-percent-annual-chance floodplain boundary delineations, regulatory floodway boundary delineations, cross sections, BFE's, flood insurance risk zone labels, and all applicable base map features;
- DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- Metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*;
- One complete set of plots of DFIRM panels showing all detailed flood hazard information at a suitable scale; and
- A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM.
- FEMA Format DFIRM Database or Data Delivery consistent with the FEMA Data Capture Standards –Appendix N of the Guidelines and Specifications for Flood Mapping Partners.

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf.

Activity 14B – Independent QA/QC Review of DFIRM Product Meeting FEMA Graphics and Database Specifications

Responsible Mapping Partner: IDNR

Scope: Upon completion of the floodplain mapping activities (Activities 10, 10A, and/or 10B) and DFIRM production activities (Activities 13, 14, and 14A), IDNR shall conduct an internal review the DFIRM to ensure it meets current FEMA graphic specifications. In addition, IDNR shall review the DFIRM spatial database to determine if it meets current FEMA database specifications. IDNR shall coordinate with other Mapping Partners, as necessary, to resolve any problems identified during this QA/QC review. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. This work shall ensure that the requirements below are met.

- All required DFIRM features are accurately and legibly labeled and follow the examples shown in the FEMA DFIRM specifications. This includes all flood insurance risk zones, BFE's, cross sections, studied streams, mapped political entities, and all roads within and adjacent to the 1-percent-annual-chance floodplains.
- All DFIRM features are correctly symbolized with the appropriate symbol, line pattern, or area shading and follow the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*.
- All map collar information is complete, correct, and follows the requirements specified in *Guidelines and Specifications for Flood Hazard Mapping Partners*.
- DFIRM mapping files are in one of the GIS file and database formats specified in FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* and conform to those specifications for content and attribution.
- DFIRM database files are in one of the database formats specified in FEMA's *Guidelines and Specifications for Flood Hazard Mapping Partners* and conform to those specifications for content and attribution.
- Metadata files describing the DFIRM data include all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*.

Standards: All work under Activity 14B shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners*, IDNR shall make the following products available to FEMA by uploading the digital data to the Multi-Hazard Information Platform (MIP) or submitting it to the FEMA Regional Office if the MIP is unavailable. This submittal will occur in accordance with the schedule outlined in Section 6 for this Activity.

- A Summary Report that describes the findings of the QA/QC review noting any deficiencies in or agreeing with the mapping results and the results of all automated or manual QA/QC steps taken during the independent QA/QC review; and a statement as to how problems were resolved.
- An annotated copy of the DFIRM with all questions and/or concerns indicated if necessary.
- If the data changed during the QA/QC process, then the updated deliverables from Activities 10, 10A, 10B and Activities 13, 14, and 14A may be resubmitted at this time.

Appendix M may be downloaded from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf.

Activity 15 - Preliminary DFIRM and FIS Report Distribution

Responsible Mapping Partners: FEMA (NSP) and IDNR

Scope: Activity 15 consists of the final preparation, review, and distribution of the Preliminary copies of the DFIRM and FIS report for community officials and general public review and comment. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. The activities to be performed are summarized below.

Preliminary FIS Compilation: The IDNR will be responsible for merging new and effective FIS text, tables, and profiles and producing one countywide FIS report.

Preliminary Transmittal Letter Preparation: The IDNR shall prepare letters to accompany the Preliminary copies of the DFIRM and FIS report and related enclosures. This letter may be prepared for FEMA only.

Final QA/QC Review of Preliminary DFIRM and FIS Report: The NSP shall perform a final QA/QC review of the Preliminary DFIRM and FIS report, including all data tables, Flood Profiles, and other components of the FIS report. The QA/QC review procedures shall be consistent with the *Guidelines and Specifications for Flood Hazard Mapping Partners*.

Discrepancy Resolution: The IDNR shall work to resolve discrepancies identified during the final QA/QC review.

Distribution of Preliminary DFIRM and FIS Report: The IDNR shall distribute by mail or package delivery service the Preliminary copies of the DFIRM and FIS report to all affected communities choosing to receive hardcopy and others as directed by FEMA. Additionally, IDNR shall post to a web site the Preliminary DFIRMs and FIS report for viewing by the public, the State NFIP Coordinator, and the FEMA Regional Office as an alternate means of collecting public comments.

News Release Preparation: The NSP shall prepare news release notifications of BFE changes for all affected communities if appropriate and perform QA/QC reviews of the notices for accuracy and compliance with FEMA format requirements. The NSP shall file the notifications for later submittal to FEMA for review.

Preliminary Summary of Map Actions (SOMA) Preparation: The IDNR in coordination with the NSP shall prepare Preliminary SOMAs for all affected communities if appropriate. The SOMA shall list pertinent information regarding LOMC's that will be affected by the issuance of the DFIRM (i.e., superseded, incorporated, revalidated).

Standards: All work under Activity 15 shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners* and the requirements documented in Section 1 and Appendix A of the FEMA *Document Control Procedures Manual.* The IDNR shall make the products listed below available to FEMA in accordance with the schedule outlined in Section 6 for this Activity.

- Preliminary transmittal letters shall be prepared and transmitted. These letters shall be prepared in accordance with the current version of the FEMA *Document Control Procedures Manual.*

- Preliminary copies of the DFIRM and FIS report, including all updated data tables and Flood Profiles shall be mailed to the Chief Executive Officer (CEO) and /or floodplain administrator of each affected community choosing to receive hardcopy documents and others, as directed by FEMA. The State NFIP Coordinator and the FEMA Regional Office will be accorded access to the preliminary DFIRM and FIS report via a website posting.

- Preliminary SOMAs, prepared in accordance with FEMA requirements, shall be provided as appropriate.

- Revised DFIRM mapping files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*, shall be provided by uploading the digital data to the MIP or submitting it by using other digital media.

- Revised DFIRM database files, prepared in accordance with the requirements in *Guidelines and Specifications for Flood Hazard Mapping Partners*, shall be provided by uploading the digital data to the MIP or submitting it by using other digital media.

- Revised metadata files describing the DFIRM data, including all required information shown in *Guidelines and Specifications for Flood Hazard Mapping Partners*, shall be provided by uploading the digital data to the MIP or submitting it by using other digital media. A Summary Report that describes and provides the results of all automated or manual QA/QC review steps taken during the preparation of the DFIRM shall be provided by the NSP.

Activity 16 - Post-Preliminary Processing

Responsible Mapping Partners: IDNR and FEMA (NSP)

Scope: Activity 16 consists of finalizing the DFIRM and FIS report after the Preliminary copies of the DFIRM and FIS report have been issued to community officials and the public for review and comment. FEMA may audit or assist in these activities if deemed to be necessary by the Regional Project Officer. The activities to be performed are summarized below.

Initiation of Statutory 90-Day Appeal Period: When required, upon completion of a final coordination meeting with the all communities in the project area, FEMA (NSP) and IDNR shall arrange for and verify that the following activities are completed in accordance with the current version of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners* and *Document Control Procedures Manual*:

- Proposed BFE determination letters are sent to the community CEOs and floodplain administrators.
- News release notifications of BFE changes are published in prominent newspapers with local circulation in accordance with 44 CFR.
- The NSP shall prepare the appropriate notices (Proposed Rules) are to be published in the *Federal Register*. The NSP shall then deliver those notices to FEMA for publication.
- When FEMA holds public meetings to present and discuss the results of this Flood Map Project, IDNR will attend the meetings and assist in the presentation of the maps.

Resolution of Appeals and Protests: FEMA or its designated contractor and IDNR shall review and resolve appeals and protests received during the 90-day appeal period. For each appeal and protest, the following activities shall be conducted as appropriate:

- Initial processing and acknowledgment of submittal;
- Technical review of submittal;
- Preparation of letter(s) requesting additional supporting data;
- Performance of revised analyses; and
- Preparation of a draft resolution letter for co-signature with FEMA and IDNR and revised DFIRM and FIS report materials for FEMA review.

FEMA's Contractor and/or IDNR shall mail all associated correspondence upon authorization by FEMA.

Preparation of Special Correspondence: IDNR shall support FEMA in responding to comments not received within the 90-day appeal period (referred to as "special correspondence"), including drafting responses for FEMA review when appropriate and finalizing responses for co-signature. IDNR also shall mail the final correspondence (and enclosures if appropriate) and distribute appropriate copies of the correspondence and enclosures upon receipt of authorization from FEMA.

Revision of FIRM and FIS Report: If necessary, IDNR shall work together with FEMA to revise the DFIRM and FIS report and shall distribute Revised Preliminary copies of the DFIRM and FIS report to the CEO and floodplain administrator of each affected community, all other Project Team members, the State NFIP Coordinator, the FEMA Regional Office, and others as directed by FEMA.

Final SOMA Preparation: IDNR shall prepare Final SOMAs for the affected communities as appropriate.

Processing of Letter of Final Determination: The IDNR shall work with FEMA to establish the effective date for the DFIRM and FIS report, and shall prepare a Letter of Final Determination (LFDs) for each affected community for FEMA review in accordance with the FEMA *Document Control Procedures Manual.* They also shall mail the final signed LFDs and enclosures and distribute appropriate copies of the signed LFDs and enclosures upon receipt of authorization from FEMA.

Processing of Final DFIRM and FIS Report for Printing: The IDNR shall prepare final reproduction materials for the DFIRM and FIS report and provide these materials to the FEMA Map Service Center for printing by the U.S. Government Printing Office. The NSP shall prepare the appropriate paperwork to accompany the DFIRM and FIS report (including Print Processing Worksheet, Printing Requisition Forms, and Community Map Actions Form) and transmittal letters to the community CEOs.

Revalidation Letter Processing: The NSP shall prepare and distribute letters for FEMA signature to the community CEOs and floodplain administrators to notify the affected communities about LOMC's for which determinations will remain in effect after the DFIRM and FIS report become effective.

Archiving Data: The NSP shall ensure that technical and administrative support data are packaged in the FEMA required format and stored properly in the library archives until they are transmitted to the FEMA Engineering Study Data Package Facility. In addition, the NSP will maintain copies of all data for a period of no less than 3 years.

Standards: All work under Activity 16 shall be performed in accordance with the standards specified in Section 5.

Deliverables: In accordance with the TSDN format described in described in Appendix M of *Guidelines and Specifications for Flood Hazard Mapping Partners* and the requirements documented in Section 1 and Appendix A of the FEMA *Document Control Procedures Manual*, FEMA's Contractor and/or IDNR shall make the following products available to FEMA in accordance with the schedule outlined in Section 6 for this Activity:

- Documentation that the news releases were published in accordance with FEMA requirements;
- Documentation that the appropriate *Federal Register* notices (Proposed and Final Rules) were published in accordance with FEMA requirements;
- Draft and final Special Correspondence (and all associated enclosures, backup data, and other related information) for FEMA review and signature as appropriate;
- Draft and final Appeal and Protest acknowledgment, additional data, and resolution letters (and all associated enclosures, backup data, and other related information) for FEMA review and signature as appropriate;

- Draft and final LFDs (and all associated enclosures, backup data, and other related information) for FEMA review and signature;
- DFIRM negatives and final FIS report materials, including all updated data tables and Flood Profiles;
- Paperwork for the final DFIRM and FIS report materials;
- Transmittal letters for the printed DFIRM and FIS report;
- LOMC Revalidation Letters if appropriate; and
- Complete, organized archived technical and administrative support data
- Complete, organized and archived case file and flood elevation docket

SECTION 2—TECHNICAL AND ADMINISTRATIVE SUPPORT DATA SUBMITTAL

The CTP Project Team members for this Flood Map Project that have responsibilities for activities included in this MAS shall comply with the data submittal requirements summarized below.

All supporting documentation for the activities in this Mapping Activity Statement shall be submitted in the TSDN format in accordance with Appendix M of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners*, dated April 2003. Appendix M is available for viewing or downloading on the FEMA Web site at http://www.fema.gov/pdf/fhm/frm_gsam.pdf. Table 2-1 highlights those sections of the TSDN that apply to each mapping activity.

If any issues arise that could affect the completion of an activity within the proposed scope or budget, the responsible Mapping Partner shall complete a Special Problem Report (SPR) as soon as possible after the issue is identified and submitted to FEMA. The SPR is to describe the issue and propose possible resolutions. (For additional information on SPRs, refer to Appendix M, Subsection M.2.1.1 of *Guidelines and Specifications for Flood Hazard Mapping Partners*.)

Table 2-1. Mapping Activities and Applicable TSDN Sections

TSDN Section	Mapping Activities															
	1	2								10, 10A, 10B	11	12	13, 13A	14, 14A	15	16
General Documentation																
Special Problem Reports	X	X								X	X	X	X	X	X	X
Telephone Conversation Reports	X	X								X	X	X	X	X	X	X
Meeting Minutes/Reports	X	X								X	X	X	X	X	X	X
General Correspondence	X	X								X	X	X	X	X	X	X
Engineering Analyses																
Hydrologic Analyses										X	X					
Hydraulic Analyses										X	X					
Key to Cross-Section Labeling										X	X					
Key to Transect Labeling										X	X					
Draft FIS Report																
Mapping Information	X	X								X	X	X	X	X	X	X
Miscellaneous Reference Information	X	X								X	X	X	X	X	X	X

SECTION 3—PERIOD OF PERFORMANCE

The mapping activities outlined in this MAS will begin on July, 15 2005, and will be completed no later than 9-30-07. The mapping activities may be terminated at the option of FEMA or IDNR in accordance with the provisions of the Partnership Agreement dated 4-28-04. If these Mapping Activities are terminated; the remaining funds from uncompleted activities, provided by FEMA for this Mapping Activity Statement, will be returned to FEMA.

SECTION 4—FUNDING/LEVERAGE

[redacted]r the completion of this Flood Map Project. IDNR shall provide any additional resources required to complete the assigned activities for this Flood Map Project. During the scoping process, additional needs may be identified. Activities associated with any additional needs would be performed based on availability of additional funds. More detailed leverage information will be determined during the detailed scoping process and reported back to FEMA at that time.

Table 4-1

Additional work needed to complete project		% of Project	Managed by	FEMA Contribution	CTP Contribution	% Leverage	Total Project Cost
Activity 1	Scoping	7.0%	IDNR, FEMA, NSP	[redacted]			
Activity 2	Outreach	2.2%	IDNR	[redacted]			
Activity 10	Floodplain Mapping (Detailed Riverine or Coastal Analysis)	3.2%	IDNR	[redacted]			
Activity 10A	Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data)	3.0%	IDNR	[redacted]			
Activity 10B	Floodplain Mapping (Refinement or Creation of Zone A)	0%	IDNR	[redacted]			
Activity 11	Independent QA/QC Review of Floodplain Mapping (Revised Areas)	2.3%	IDNR	[redacted]			
Activity 12	Base Map Acquisition	0.4%	IDNR	[redacted]			
Activity 13	DFIRM Production (Non-Revised Areas)	32.9%	IDNR	[redacted]			

Activity 13A	Independent QA/QC Review of DFIRM Production (Non-Revised Areas)	3.0%	IDNR	[redacted]
Activity 14	DFIRM Production (Merge Revised and Non-Revised Information)	1.4%	IDNR	[redacted]
Activity 14A	Application of DFIRM Graphic and Database Specifications	18.2%	IDNR	[redacted]
Activity 14B	Independent QA/QC Review of DFIRM Product Meeting FEMA Graphic and Database Specifications	9.0%	IDNR	[redacted]
Activity 15	Preliminary DFIRM and FIS Report Distribution	11.5%	IDNR, FEMA, NSP	[redacted]
Activity 16	Post-Preliminary Processing	5.7%	IDNR, FEMA, NSP	[redacted]
		100.0%	TOTALS	[redacted]

FEMA funds identified above are available to be used for the following activities*:

Activities	FUNDABLE?
Activity 1 – Scoping	Yes, up to 10% of total cost
Activity 2 - Outreach	Yes, up to 10% of total cost
Activity 3 – Field Surveys and Reconnaissance	Yes
Activity 4 – Topographic Data Development	No, unless approval given during scoping phase by Regional PO
Activity 5 – Independent QA/QC Review of Topographic Data	No, unless approval given during scoping phase by Regional PO
Activity 6 –Hydrologic Analyses	Yes

Activities	FUNDABLE?
Activity 6A –Coastal Flood Hazard Analyses	Yes
Activity 7–Independent QA/QC Review of Hydrologic Analyses	Yes
Activity 7A–Independent QA/QC Review of Coastal Hazard Analyses	Yes
Activity 8 – Hydraulic Analyses	Yes
Activity 9 – Independent QA/QC Review of Hydraulic Analyses	Yes
Activity 10 – Floodplain Mapping (Detailed Riverine or Coastal Analysis)	Yes
Activity 10A – Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data)	Yes
Activity 10B – Floodplain Mapping (Refinement or Creation of Zone A)	Yes
Activity 11 – Independent QA/QC Review of Floodplain Mapping (Revised Areas)	Yes
Activity 12 – Base Map Acquisition	No
Activity 13 – DFIRM Production (Non-Revised Areas)	Yes
Activity 13A – Independent QA/QC Review of DFIRM Production (Non-Revised Areas)	Yes
Activity 14 – DFIRM Production (Merge Revised and Non-Revised Information)	Yes
Activity 14A – Application of DFIRM Graphic and Database Specifications	Yes
Activity 14A – Independent QA/QC Review of DFIRM Product Meeting FEMA Graphic and Database Specifications	Yes
Activity 15 – Preliminary DFIRM and FIS Report Distribution	Yes
Activity 16 – Post-Preliminary Processing	Yes

*This table is for information purposes only

SECTION 5—STANDARDS

The standards relevant to this Mapping Activity Statement are provided in Tables 5-1 and 5-2. Information on the correct volume, appendix, section, or subsection of the FEMA *Guidelines and Specifications for Flood Hazard Mapping Partners* to be referenced for each mapping activity are summarized in Table 5-2.

These Guidelines are available for viewing or download from the FEMA Flood Hazard Mapping Web site at http://www.fema.gov/fhm/dl_cgs.shtm.

Table 5-1. Applicable Standards for Project Activities

Applicable Standards	Activities															
	1	2								10, 10 A, 10 B	11	12	13, 13A	14, 14A	15	16
Guidelines and Specifications for Flood Hazard Mapping Partners, April 2003	X	X								X	X	X	X	X	X	X
American Congress on Surveying and Mapping Procedures	X															
Global Positioning System (GPS) Surveys: National Geodetic Survey (NGS-510), "Guidelines for Establishing GPS-Derived Ellipsoid Heights," November 1997	X															
Engineer Manual 1110-1-1000, *Photogrammetric Mapping* (USACE), July 1, 2002	X															
Engineer Manual 1110-2-1003, *Hydrographic Surveys* (USACE), January 1, 2002	X															
"Numerical Models Accepted by FEMA for NFIP Usage," Updated April 2003	X															
Content Standard for Digital Geospatial Metadata (Federal	X	X								X	X	X	X	X	X	X

Geographic Data Committee), 1998																
Document Control Procedures Manual, December 2000	X	X													X	X
44 Code of Federal Regulations Part 66 and 67		X														

Table 5-2. Project Activities and Applicable Portions of FEMA Guidelines and Specifications

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
1	Scoping	Appendix I, Scoping Report document attached in Appendix A to this Mapping Activity Statement
2	Outreach	44 Code of Federal Regulations Part 66 and 67

Table 5-2. Project Activities and Applicable Portions of FEMA Guidelines and Specifications (Cont'd)

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
10	Floodplain Mapping (Detailed Riverine or Coastal Analysis)	Volume 1, Section 1.4 (specifically Subsection 1.4.2.3) Appendix C, Sections C. 4 and C.6 Appendix D, Sections D.2 (specifically Subsection D.2.7) and D.3 (specifically Subsection D.3.7) Appendices E, F, G, H, K, L, M, and N
10A	Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2 and 1.4.2.3) Appendix C, Section C.6 (specifically Subsection C.6.1.3) Appendices K. L, M, and N
10B	Floodplain Mapping (Refinement or Creation of Zone A)	Volume 1, Section 1.4 (specifically Subsection 1.4.2.3) Appendix C, Sections C.4 and C.6 Appendices K, L, M, and N
11	Independent QA/QC Review of Floodplain Mapping (Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.1 and 1.4.2.3) Appendix C, Sections C.4 and C.6 Appendix D, Sections D.2 (specifically Subsection D.2.7) and D.3 (specifically Subsection D.3.7)

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
		Appendices E, F, G, H, K, L, and M
12	Base Map Acquisition and Preparation	Volume 1, Section 1.3 (specifically Subsection 1.3.1.8) and 1.4 (specifically Subsections 1.4.3.1 and 1.4.3.2) Appendix A, Section A.1 (specifically Subsection A.1.1)
13	DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2, 1.4.2.3, and 1.4.3.2) Appendices K, L, M, and N
13A	Independent QA/QC Review of DFIRM Production (Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.2, 1.4.2.3, and 1.4.3.2) Appendices K, L, and M
14	DFIRM Production (Merging Revised and Non-Revised Areas)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3 and 1.4.3.3) Appendices K, L, M, and N
14A	DFIRM Production (Application of FEMA Graphics and Database Specifications)	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3, 1.4.3.3, 1.4.3.9, and 1.4.3.10) Appendices K, L, M, and N
14B	Independent QA/QC Review of DFIRM Product Meeting FEMA Graphics and Database Specifications	Volume 1, Section 1.4 (specifically Subsections 1.4.2.3, 1.4.3.3, 1.4.3.9, and 1.4.3.10) Appendices K, L, and M
15	Preliminary DFIRM and FIS Report Distribution	Volume 1, Sections 1.4 (specifically Subsections 1.4.2 and 1.4.3) and 1.5 (specifically Subsection 1.5.1)

Activity Number	Activity Description	Applicable Volume, Section/Subsection, and Appendix
		Appendices J, K, L, and M
16	Post-Preliminary Processing	Volume 1, Section 1.5 (specifically Subsection 1.5.2) Appendices J, K, L, and M

SECTION 6—SCHEDULE

The activities documented in this MAS shall be completed in accordance with the project schedule Table 6.1. If changes to this schedule are required, the responsible Mapping Partner shall coordinate with FEMA and the other Mapping Partners in a timely manner.

Table 6.1

Activities	RESPONSIBLE PARTNER(S)	DATE DUE
Activity 1 – Scoping	IDNR, FEMA, NSP	1/31/06
Activity 2 – Outreach	IDNR	12/31/06
Activity 10 Floodplain Mapping (Detailed Riverine or Coastal Analysis)	IDNR	6/30/06
Activity 10A – Floodplain Mapping (Redelineation Using Effective Flood Profiles and Updated Topographic Data).	IDNR	6/30/06
Activity 10B – Floodplain Mapping (Refinement or Creation of Zone A)	IDNR	6/30/06
Activity 11 Independent QA/QC Review of Floodplain Mapping (Revised Areas)	IDNR	7/31/06
Activity 12 – Base Map Acquisition	IDNR	2/28/06
Activity 13 – DFIRM Production (Non-Revised Areas)	IDNR	5/31/06
Activity 13A – Independent QA/QC Review of DFIRM Production (Non-Revised Areas)	IDNR	6/30/06
Activity 14 – DFIRM Production (Merge Revised and Non-Revised Information)	IDNR	8/31/06
Activity 14A – Application of DFIRM Graphic and Database Specifications	IDNR	9/30/06
Activity 14B – Independent QA/QC Review of DFIRM Product Meeting FEMA Graphic and Database Specifications	IDNR	10/31/06
Activity 15 – Preliminary DFIRM and FIS Report Distribution	IDNR, FEMA, NSP	11/30/06
Activity 16 – Post-Preliminary Processing	IDNR, FEMA, NSP	9/30/07

SECTION 7—CERTIFICATIONS

Floodplain Mapping, DFIRM Production and Application of FEMA and Database Specifications (Activities 10, 10A, 10B, 11, 13, 14 and 14A).

- The DFIRM metadata files shall include a description of the horizontal and vertical accuracy of the DFIRM base map and floodplain information.

Base Map Acquisition and Preparation (activity 12)

- A community official or responsible party shall provide written certification that the digital data meet FEMA minimum standards and specifications.

- IDNR shall provide documentation that the digital base map can be used by FEMA. Please note that uploading base map data to the MIP does not constitute agreement that the digital base map can be used by FEMA. Documentation is still required.

Section 8—Technical Assistance and Resources

The IDNR may consult with the FEMA Regional Project Officer to request support in the area of post-preliminary processing from the National Service Provider. Certain subtasks in Activity 15 and Activity 16 described earlier in this MAS have been designated as the responsibility of the NSP. If it is determined that these tasks fall outside of the scope of the NSP work agreement with FEMA, then further discussion and negotiation will be necessary between the CTP and FEMA to determine how certain post-preliminary processing tasks are to be accomplished.

SECTION 9 --Contractors

The IDNR does not intend to use the services of a contractor for the Flood Map Project documented in this Mapping Activity Statement. The IDNR shall ensure that the procurement for all contractors, if any are used for this Flood Map Project complies with the requirements of 44 CFR 13.36.

Part 13 may be downloaded in PDF or text format from the U.S. Government Printing Office Web site at http://www.access.gpo.gov/nara/cfr/waisidx_04/44cfr13_04.html.

SECTION 10—REPORTING

FINANCIAL REPORTING:

Because funding has been provided to the IDNR by FEMA, financial reporting requirements will be in accordance with Cooperative Agreement Articles V and VI.

IDNR shall provide financial reports to the FEMA Regional Project Officer and Assistance Officer in accordance with the terms of the signed Cooperative Agreement for this Mapping Activity Statement.

STATUS REPORTING:

Status reports will be submitted on a quarterly basis in accordance with the financial reporting submittals. At a minimum these reports will include a summary of the work as outlined in the Cooperative Technical Partner (CTP)/Map Modernization Project Quarterly Report located in Appendix B of this Mapping Activity Statement. The Project Officer, as needed, may request additional information on status.

IDNR may meet with the NSP and/or FEMA more frequently (up to bi-weekly if needed) to review the progress of the project in addition to the quarterly financial and status submittals. These meetings will alternate between FEMA's Regional Office, the IDNR office and conference calls as necessary.

Where specific actions are funded by FEMA, the reporting requirements will be in accordance with the FEMA Cooperative Agreement. IDNR shall work with the FEMA Project Officer to establish an acceptable protocol for reporting of project information at the beginning of each project. IDNR will update the Multi-Hazard Information Platform (MIP) on a monthly basis. If the MIP is not available, the information shall be submitted to the Regional Management Center (RMC). If this report proves to be sufficient, the Assistance Officer may waive the written monthly reports thereafter (reference 44 CFR Part 13.40, *Monitoring and Reporting Program Performance*). However, this shall not affect the financial reporting requirements (reference 44 CFR Part 13.41, *Financial Reporting*). The PO shall ensure that key IDNR staff has been provided access and passwords to the MIP. The PO will also provide project-naming conventions for the MIP.

Section 11—Project Coordination

Throughout the project, all members of the Project Team will coordinate, as necessary, to ensure the products meet the technical and format specifications required and contain accurate, up-to-date information. Coordination activities shall include:

- Meetings, teleconferences, and video conferences with FEMA and other Project Team members monthly basis;
- Telephone conversations with FEMA and other Project Team members on a scheduled basis monthly and an ad hoc basis, as required;
- Updates to the MIP, and other FEMA status information systems in accordance with requirements in Volumes 1 and 3 of *Guidelines and Specifications for Flood Hazard Mapping Partners*; and Section 10; and
- E-mail, facsimile transmissions, and letters, as required.

SECTION 12—POINTS OF CONTACT

The points of contact for this Flood Map Project are Lee Traeger, the FEMA Regional Project Officer; John Bishop, the Project Manager for the CTP; or subsequent personnel of comparable experience who are appointed to fulfill these responsibilities. When necessary, the any additional assistance of FEMA should be requested through the FEMA Regional Project Officer.

Each party has caused this MAS to be executed by its duly authorized representative.

Gary Clark, Director
Office of Water Resources
Illinois Department of Natural Resources

7/14/2005
Date

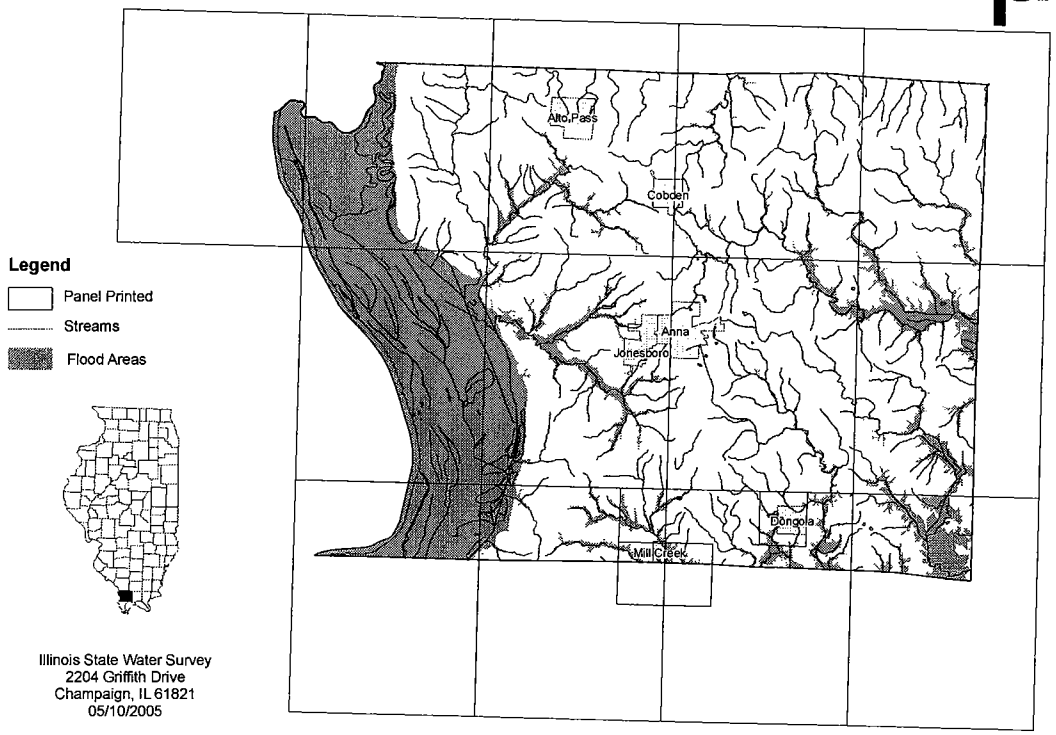
Terry Reuss-Fell, Branch Chief
Hazard and Risk Assessment, Region 5
Federal Emergency Management Agency

July 6, 2005
Date

Union County, IL 17181

Preliminary DFIRM Panel Layout

Panel Count
13 @ 1:24000
4 @ 1:6000
0 Panels Not Printed
17 Total Panels



Legend

- Panel Printed
- Streams
- Flood Areas

Illinois State Water Survey
2204 Griffith Drive
Champaign, IL 61821
05/10/2005